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STDs and AIDS in Ghana

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Until the first case of Acquired Immune Deficiency Syndrome (AIDS) in Ghana in 1986, little attention had been paid to sexually transmitted diseases (STDs). It was the other communicable diseases, such as malaria, tuberculosis, diarrhoeal and respiratory diseases, that were the major killers and thus of greater concern to the medical and epidemiological establishment. However, the data on STDs in combination with the inadequacy of health facilities point to an enormous health problem. Moreover, it is well-established that in Africa, STDs (especially those improperly treated) assist the transmission of the AIDS-causing human immunodeficiency virus (HIV).¹

History of venereal diseases in the Gold Coast

Venereal diseases are believed to have been well established in Ghana long before the twentieth century, especially along the coast.² A European visitor to the Guinea Coast in the mid-17th century observed the erotic behaviour of the coastal people and the resulting complications: "... they are very lustful and impudent ... and therefore much troubled with the Pox ... I'll assure you they [the natives] make themselves little reckoning in any of their maladies: they are troubled with Clapdollars, Botches, Worms, Pains in the Head, and Burning Fevers, but these are the favours of their women, to whom they are inexpressably addicted."³

The Portuguese, Dutch and other Europeans erected battlements along the coast of the Gold Coast as they were drawn there for trade as early as the late fifteenth century. The men came alone and were involved with the coastal people on different levels: as hard-nosed entrepreneurs, as interested observers, as intimates. The arrival of the Europeans in ships and at their castles presented opportunities for the introduction and diffusion of new diseases like smallpox and syphilis.⁴

By the 18th century, mixed unions in European coastal settlements were a common feature of life. Governor Richard Miles "referred to the African 'wife' by whom he had had seven children ..."⁵ Thus, in contrast to Central and East Africa, most of modern Ghana experienced centuries of exposure to European diseases by the mid-1800s. After the British established their first West African colony in the Gold Coast in 1874 and officially took over, they initiated formal programmes in areas of public health.

While sexual promiscuity has historically

been commonplace in Ghana, it has not been perceived as problematic by indigenous Ghanaians. Prostitution has, however, for both local people and colonial administrators, for reasons of morality and health. MacCormac writes in 1874: "I would have licensed houses of entertainment at all our ports, with regulated charges and placed exclusively in the hands of respectable, responsible people."⁶ He makes no specific mention of venereal disease (and even the Infectious Disease Ordinance of 1921 did not include VD⁷). Notably, the Contagious Disease Acts passed in 1864-9 in Britain, required registration of prostitutes and periodic medical examination for detection of venereal disease (VD).

In the 1880s, the Gold Coast Medical Department was established, reporting to the Governor through the Colonial Secretary. 1909 saw the creation of the Sanitary (Health) Branch, responsible for sanitation, vaccinations, and other preventative measures, and in 1919 the Medical Research Institute (Laboratory) Branch for scientific investigations and routine clinical and pathological tests.

There is no doubt that VD spread rapidly from the coast inland during the colonial period, "thanks to social changes and increasing mobility."⁸ When first studied, gonorrhea was the most common venereal disease. Syphilis was less common and spread more slowly, perhaps because the agent of syphilis, *Treponema pallidum*, is closely related to the pathogen of yaws, *Treponema pertenue*, commonly prevalent in the area, and victims of yaws acquire partial immunity against syphilis.

Gonorrhoea was known to be widespread in Kumase, Accra and other major towns before World War I. In 1902, only 20 cases of syphilis and 10 of gonorrhoea had been reported, whereas in 1907, there were 274 and 427 cases respectively. In 1920, 475 and 1224 cases respectively were reported. (In a personal communication, Robert Biggar suggests that many of the venereal ulcers reported as "syphilis" were in fact chancroid). In the early 1920s, VD was widespread in southern Ghanaian towns and disseminated to the rest of the country.

Dr Carl Reindorf, a native Ghanaian, was appointed Medical Officer for Akwapim (a region in southern Ghana) in 1919. The rates for venereal disease were so high that he went to England to do a training course, and upon return to Accra in 1921 was given a full-time

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but temporary appointment as head of the VD clinic in Victoriaborg. The clinic served only Accra and environs. According to Reindorf's records,⁹ in 1922–23, 19.35 per 1000 were treated but that in 1925–26, the proportion increased to 117.91 per 1000. He claimed that at that time, "over 75% of the town between ages 18–45 suffer from some form of venereal disease".¹⁰ The reported numbers for the country as a whole in 1925–6 were 1503 for syphilis and 3760 for gonorrhoea.

The diseases advanced northward. Eastern Dagomba was unaffected in 1928, but by 1937 there were a few reported cases of gonorrhoea. Syphilis was common in some southern towns but not in rural areas or the north. Gonorrhoea in particular, while it spread slowly in the north, was on the increase; it was primarily northern men who were drivers and peddlers who had travelled to the south, and their contacts, who were affected. The incidence remained high in the coastal towns, exacerbated by the influx of labourers and troops during the Second World War.

In the mid-1940s, the Gold Coast troops (serving with the British) had a 50% VD rate.¹¹ Gonorrhoea was by far the most common infection, followed by soft chancre, lymphogranuloma inguinale, and then syphilis. By 1946–50, in the country at large, gonorrhoea was nine times as common as syphilis: 82,430 cases of gonorrhoea to 9,340 cases of syphilis (table).

Many more males were seen and treated than females, in part due to the care given to soldiers and prisoners (males), in part because female cases of gonorrhoea can be asymptomatic. At the national level, venereal diseases apparently had little effect on overall population rates in Ghana.

In the 1960s, gonorrhoea was still the most prevalent venereal disease. The extent of the infection was unknown, as only the most severe cases registered for treatment. The incidence of venereal disease in rural areas appeared to be declining, possibly as a result of the extensive use of penicillin in the treatment of yaws.¹²

According to a recent small study in November 1992 to March 1993, the incidence of STDs in Accra and Kumase was about 1% (interview with Dr Beatrice Mensah 7 June 1993). A member of the Department of Epidemiology at Korle Bu Hospital reported that there are no genital ulcers or syphilis; the problem lies with gonorrhoea, chlamydia (which causes non-specific urethri-

tis) and trichomonas (interview with Dr E Asamoah-Odei 2 June 1993).

Facilities for HIV sero-diagnosis were established in Accra in late 1985 at the Noguchi Memorial Institute for Medical Research, as well as at Korle Bu Hospital, Accra. The first AIDS case was reported from Koforidua (Eastern Region) in March 1986 followed by several more from the same region. "The clinical presentation was similar to the disease described from East and Central Africa."¹³ In 1987, the first case of paediatric AIDS was diagnosed, a child born to a HIV-1 positive mother.¹⁴ Until September 1988, reports to WHO did not differentiate between HIV seropositives and AIDS cases and as a result, there are discrepancies in reported figures for AIDS.

In Ghana, unlike other areas, there was an initial female predominance. In 1986, 90% of AIDS victims were women (in contrast to the USA, where most cases have been men and in Central Africa where the prevalence has been equal). Most were sexually active and 96% had recently lived abroad, especially in Cote d'Ivoire. Many had worked as prostitutes.¹⁵ Dr Konotey-Ahulu, a London-based Ghanaian medical researcher, referred to these early AIDS cases in Ghana as "repatriation AIDS."¹⁶ The female to male ratio ranged from 11:1 to 7.7:1. By the end of 1986, HIV-1 infections had been documented in 115 Ghanaians; by the end of 1987, 276 were known to be infected. The ratio of females to males declined to 6:1 in 1987.¹⁷ Currently, however, the sex ratio for HIV infection is 1:1, underscoring the fact that transmission is mainly through heterosexual contact.

Between March 1986 and September 1988, reports made to the WHO did not differentiate between HIV seropositives and AIDS cases. In October 1988 a new AIDS case definition for the country was adopted¹⁸: "A person is said to have AIDS when he has two of the major signs and one minor sign plus evidence of HIV by the ELISA method, or when he has three major signs with or without a minor sign plus evidence of HIV by the ELISA method . . . The major and minor signs are the same as in the WHO clinical case definition."

While it is hard to say how complete AIDS reporting in Ghana is, the total number of reported cases is probably an underestimate: many are not seen by qualified medical staff and thus are not reported; sometimes surveillance forms have not been forwarded; in the Northern Region, testing facilities are non-existent in many towns; some patients fear being stigmatised and therefore do not attend health institutions.¹⁹

Thus the numbers of reported AIDS cases²⁰ were: to December 1986: 72, to February 1988: 145, to December 1989: 1226, to January 1991: 2100, to December 1992: 4765. (The numbers up to 1989 presumably include HIV seropositives).

There are regional differences. For example, in late 1989 and again in mid-1992, the Eastern Region was reported as having the highest incidence. The incidence in the

Table Cases of syphilis and gonorrhoea 1913–1955

	Syphilis			Gonorrhoea*		
	Male	Female	Total	Male	Female	Total
1913	281	102	412	714	34	700
1926–7	790	529	1503	2333	1128	3760
1932–3	439	221	791	2569	500	3325
1936	481	263	856	3562	477	4416
1940	371	209	695	5561	1021	7336
1946	910	361	1271	9111	1793	10904
1950	1368	453	1821	13137	4328	17465
1955	803	236	1039	10454	1757	12211

*Source: Patterson, table 23.

Ashanti Region has also been high, and in January 1991, an average of 50 AIDS cases per month (these may have been seropositives, not AIDS) were reported at Kumase's Komfo Anokye Hospital. Women continued to constitute 70% to 75% of AIDS sufferers in the country and most AIDS patients of both sexes are aged between 20 and 39 years (figure derived from short dateline articles in *West Africa* 1988–93).

The National AIDS Control Programme reports a far higher number for December 1992 than that reported to the health authorities and cited above, perhaps because it does not discriminate between HIV and AIDS: 10 285 AIDS cases (6741 women and 3544 men). Over 9000 of these cases are people aged between 15 and 49 years. The figure for HIV seropositives was 11 940 (8505 women and 2564 men).

In 1986, when the first two cases were seen, none of the 247 blood donors and only 1% of the prostitutes in Accra were infected with HIV. However, by 1989, 16% of the prostitutes tested were seropositive.²¹ In July 1993, Tema General Hospital Polyclinic (the port city, 15 miles east of Accra) found that 14% of 205 blood donations were HIV positive (from *West Africa* 26 July–1 August 1993).

Therapeutic and control measures

Therapeutic measures did not begin to catch up with the problem of venereal disease until after 1945, when antibiotics became a powerful weapon.²² According to our anonymous seventeenth century observer, there were no local remedies for sexual diseases, but "for the Pox and Clap-dollars, they use much salfa parilla [perhaps parillin, obtained from sarsaparilla root], which the Hollanders [Dutch] have furnished them with."²³

After his clinic was established in Accra in 1920, Dr Reindorf gave lectures and published pamphlets in Ga and Twi to encourage attendance. He was concerned that infections were increasing and advocated the following: legislation to deal with VD; limiting medical practice to qualified persons; prohibiting patent medicine advertisements; and "establishing the State Serum Institute which has for its main functions the laboratory diagnosis of syphilis and the maintenance of a card index of infected persons."²⁴

The treatment of syphilis in the early twentieth century was neosalvarsan (the "magic bullet"), one of the few specific antimicrobial drugs prior to the late 1930s. Penicillin was introduced after World War II. Dr Reindorf revolutionised therapy in 1920 when he began treating syphilis and yaws with arsenicals (neoarsenobillon injections). This was the first "wonder drug" employed in Ghana. For gonorrhoea, there was no effective treatment until the advent of sulpha drugs.

In the 1940s, there were acute staff shortages and the clinics were too expensive to run. Civilian medical authorities were conscious of the VD problem, but it took back seat to other infectious diseases. As far as prophylaxis was concerned, there was a general failure of all

known methods. Throughout West Africa, a three month trial of prophylactic centres for soldiers did not reduce VD, because the men would leave camp without permission, bring women in, or get around the African orderlies who were not diligent. An untreated heavily infected female population and the failure of male prophylaxis produced a gigantic problem. Because it approached an epidemic, the British administration focused on educating Ghanaians "to dislike and avoid venereal disease and providing the means by which they could get treated if they became infected."²⁵

Among the West African troops, 80–90% suffering from gonorrhoea responded to sulphonamide. However, if the medical officer did not crush the sulpha tablets and administer them personally, the men would sell them in the town or the village for 1 shilling a tablet. Thus, they gave 6 g in one draught daily for three days followed by 12 daily pints of water. By 1945 penicillin was available and sulpha-resistant strains could be treated with the new drug. The mass antibiotic therapy against yaws "undoubtedly contributed to a reduced prevalence of both syphilis and gonorrhoea after 1953."²⁶

In the 1950s, just before independence, there was no department responsible for the treatment of venereal disease as there was for tuberculosis. Nor was there any agency to follow up contacts.²⁷ It was suspected that there was much illicit trade in sulphonamides, particularly in the treatment of gonorrhoea. To prevent this, and the consequence of resistant organisms, the Pharmacy and Poison ordinance provided that "only medical practitioners may treat venereal diseases and the sulphanamides may only be supplied in a doctor's prescription."²⁸

In the 1970s, there were still no special VD clinics in Ghana to help in prevention of gonorrhoea and non-gonococcal urethritis. Treatment was successful with a single dose injection of procaine penicillin, single doses of ampicillin (with or without probenecid), spectinomycin (togamycin) tetracycline and trimethoprim and sulphamethoxazole (Septrim). Unfortunately, 70% of the patients with sexually-transmitted urethritis were treated by "dispensers" and non-medical personnel.²⁹

In 1985, a medical report indicated that many Ghanaians expelled from Agege (Nigeria) were suffering from STDs and they were quarantined. Adabraka Polyclinic was established to care for them under the Communicable Disease Control of Greater Accra Regional Health Administration. Routine examinations were done for trichomonas, candida and gonorrhoea. The clinic was dormant from 1989 till 1991 because there was no resident doctor. Since then, the clinic has assumed responsibility for the Regional AIDS Control Programme. The Adabraka Polyclinic is a referral clinic. It now also screens all cases for HIV (unless patients refuse), and cares for those diagnosed elsewhere, as well as those who come in without being referred.

Despite the high incidence of STDs, since 1986 the emphasis in the country has been on AIDS. Now they are trying to bring STD control into the picture. According to Dr Mensah, they are not seeing the bulk of the cases, because people go to private clinics or even government hospitals (where they feel they have greater anonymity), and the latter do not pass on the statistics. The Ministry of Health still uses an old daily activity report form, which, according to Dr Mensah, includes no syndrome-specific notations like gonorrhoea. (Interview with Dr B Mensah 6 June 1993.)

Surveillance of AIDS in Ghana began in 1985 following the formation of the National Technical Committee on AIDS (NTCA). This agency was mandated to assess the AIDS situation and advise the Government on prevention and control.³⁰

In 1987–89, USAID funded an education program for prostitutes and their clients. They found that 64% were using condoms. Condoms are provided through Government-subsidised distribution, though there is a minimal cost.

A Medium Term Plan for AIDS Prevention and Control was organised in September 1989 by the NCTA. A five year programme was drawn up by the Ministry of Health and NCTA in collaboration with WHO's Global Programme on AIDS to prevent further transmission and spread. Donor countries included the EEC, France, Britain and West Germany. The EEC had already agreed to finance STD control as part of the programme. The five-year programme included laboratory services, screening facilities at blood banks and development of a zonal banking system. There were also workshops on AIDS. Key groups included progressive organisations, traditional healers, churches, hoteliers, airline workers and hairdressers. A 24-member National Advisory Council on AIDS has been formed to advise government on policy matters.

AIDS provoked an extraordinary interest in and commitment to STD prevention and control. An outstanding reason was that STDs have been recognised as important co-factors in the transmission of HIV. A study of health centres in Accra and Kumase, Ghana's two largest cities, was carried out in the spring of 1992, with support from the EEC and Family Health International. It was concluded that a basic infrastructure exists for controlling STDs, although there are problems such as long patient waiting time, scarcity of drugs, poor service. In addition, doctors did not do physical examinations. There were no vaginal specula. Laboratory tests for STDs were requested in 50% of the cases at their first visit. In the balance, tests were requested only when symptoms persisted after treatment. Microscope slides and reagents for Gram staining were not readily available and none of the laboratories had the means to perform serological tests for syphilis. Seventy percent of the clinicians started treatment of patients the same day without waiting for the results of laboratory tests. The regimens pursued var-

ied; for example, there are five different regimes for treating gonorrhoea, including cefuroxime, spectinomycin, amoxycillin, tetracycline, gentamycin, and cotrimoxazole.

Practitioners believe that STDs are common in Ghana; as facilities for management are inadequate, STDs result in a high level of complications, such as urethral stricture, pelvic inflammatory disease, ectopic pregnancy, infertility, cervical cancer, primary hepatocellular cancer and blindness.³¹ Yet, the 1992 study reveals that less than 1% of consultation time of health care providers in the two cities concerns STDs.

The Ministry of Health brought the STD and AIDS control programmes together in 1993. The general objective of strengthening STD control has been to reduce morbidity of STDs as co-factors in HIV transmission, and to reduce complication associated with STDs.³² Specifically, the programme has set out to strengthen the capability to do research and to train health workers in prevention, diagnosis and treatment of STDs, and to promote behaviour which will reduce the incidence and impact of STDs in Ghana.

The Ministry of Health began developing a network of diagnostic services, introducing counselling for those HIV positive, and undertaking public education about safe sex. For example, the Adabraka Polyclinic has been able to bring together taxidriver and long-distance drivers (both at high risk) for education sessions with the Adventist Development Relief Agency (ADRA).

Everyone in the clinical and research establishment agrees that AIDS awareness is high. Even in 1987, when the disease was in its early phase in Ghana, in a survey of 267 men and women living throughout the country, only one person had not heard of AIDS, most knew that it was spread through heterosexual sex, and 97% knew that it was fatal. The most common methods for AIDS prevention acknowledged by those surveyed included avoiding indiscriminate sex, staying with one partner, and using condoms.³³ Unfortunately, many did not know of other modes of spread. In 1991–92, 211 hospital outpatients in Kumase, aged 16 and over, were interviewed randomly. Only a third to half knew that AIDS could be contracted through inoculation or blood transfusion.³⁴

The question is: how to translate awareness into behaviour? So far there are seminars and educational programs which involve communities, public service advertisements on television, and pamphlets and posters. There is some resistance from religious fundamentalists, who do not want elementary school children to hear about sex. AIDS awareness is being built into the school curriculum, in coordination with the Ministry of Information.

Social, cultural and economic dimensions

The growing intensity of intercommunication in the colonial period led to greater contacts with strangers. Roads, railroads, shipping stimulated mobility; people entered unfamiliar disease environments. Rural labourers in

towns, mines and cocoa farms, commonly used prostitutes, many of whom were labour migrants themselves. Women from southern Togo went to Accra and other Colony towns. In 1925, the Central Accra Hausa chief, Kadri English complained to the District Commissioner that Hausa women were leaving northern Nigeria for Accra, where "evil influences are somewhat paramount," and were divorcing their husbands "in order to carry on immoral practices and the result is sickness and untimely death. Venereal disease is too common among my people and unless a law is enacted by you or the authorities enforcing the repatriation of all Hausa women without husbands to their homes, immorality will be on the ascendant, and indubitably defy the praise-worthy endeavours of the Health Officers."³⁵

While promiscuity itself does not cause sexually transmitted diseases, it is instrumental in their transmission and as such provokes concern. In the early 1970s, a Ghanaian doctor, concerned about another upsurge in gonorrhoea, focused on the casualness of sex among all ages of school-goers, on the combination of no symptoms in girls and promiscuity, and on polygyny as vehicles for rapid dissemination.³⁶ While polygyny is far less common than it was, married men commonly have one or two girlfriends, which represents a kind of functional polygyny.

One might ask, why is this worse than polygyny? Quite simply, because it is far less stable, there is far greater turnover in partners. And what is in it for the unmarried women? In Ghana, men support their girlfriends financially. The issue for the women, then, is less social than economic. One contemporary anthropologist working on STDs and AIDS in Africa further notes that if we want to understand the high STD rates in Africa, we must look beyond such promiscuity to other causes including poverty and its consequences.³⁷

Social and economic development in colonial and post-colonial countries like Ghana generally affects the sexes differentially. The conflation of indigenous and colonial sexism has meant that women have been the last to be educated, to become literate, to gain access to well-paying positions. Life in the city is expensive, especially as compared with that in the hometown, where one may live within the bosom of the extended family. In the urban area, an uneducated woman's occupational choices have been limited to market trade, domestic service, and prostitution. Market trade requires a substantial capital investment if one is to make any money. Domestic service is pretty much subsistence work. Prostitution can be lucrative and requires no investment. Moreover, there is little traditional concern regarding casual sex—as long as a woman marries (even only briefly) and/or has a child, either ensuring adult status. Prostitution is an urban phenomenon, and women become prostitutes as a means to survival in the city. This is true now as it was true 70 years ago.

After 1922, prostitution was on the

increase.³⁸ It was also a major problem, because the prostitutes largely hailed from Togo and Nigeria and thus were not under the control of either their families or the local Native Authority.³⁹ In 1930, the *Gold Coast Independent* wrote that prostitutes and brothels in Accra were swelling in numbers daily, and that the prostitutes were foreigners from other African countries.⁴⁰

In fact, it was prostitution from outside of Ghana that brought AIDS to Ghana (in Accra) in the mid-1980s. AIDS was originally associated with a history of residence in Abidjan, contracted by Ghanaian women in Abidjan who went there to practise prostitution. Some were so sick that no driver would bring them back. Because of the extended family system, a dying person could always get care from a family member in the home village and never emerge. Thus it is hard to know who is dying of AIDS.

Infection in infants was first detected "because the mothers gave a history of high risk behaviour, that is prostitution."⁴¹ In medical terms, the head of the STD clinic at Adabraka Polyclinic, Dr Mensah, does not view prostitution inside Ghana as a large problem, even though prostitutes are not controlled as they are in Senegal. What she does regard as problematic is that men are unwilling to use condoms. In one study, 66% of the businessmen and professionals who were customers of high-class prostitutes refused to use condoms.⁴² Dr Mensah's colleague and AIDS researcher, Dr Neequaye, tried to set up a control system and people started to complain that it would mean legalising prostitution.

In 1993, doctors feared they were just seeing the tip of the STD and AIDS iceberg. According to Dr Bernice Mensah, in Ghanaian culture generally, and among couples particularly, men and women do not talk much about sex or share equally in decisions of a sexual nature. A study of contraceptive attitudes among spouses in Ghana reveals that men/husbands dominate the decision-making process in this area. The influence is so pervasive it cuts across all age groups, regions and ethnicities. "It is so strong that even if a woman's opinion is in line with cultural norms but lacks the husband's support or runs contrary to his own opinion, her opinion is untenable."⁴³ In a related vein, the focus of Ministry of Health public education programmes on safe sex is women aged between 20–40 years, since they are more vulnerable to HIV as they have little say about condom use (*West Africa* 12–18 July 1993:1215).

HIV transmission in Ghana is primarily through heterosexual sex and is approaching a 1:1 male to female ratio. According to Dr Mensah, the drug abuse population is not large and thus far no cases have come to light, and as homosexuality does not appear to be widely practised, homosexual transmission has not been a focus of public health attention. The highest incidence of AIDS cases has been in the Eastern and Ashanti Regions "where definite socio-cultural practices promote young girls to enter prostitution."⁴⁴

Perspectives on the present and the future

The issue here is part socio-cultural (the traditions that people hold dear, the rituals and relationships they participate in, the status markers they employ), and part economic (how to make a living, how to spread the resources).

In Ghana, development has taken place at different rates for different sectors of the population. The consequent regional, ethnic, socio-economic and sexual inequities must be acknowledged and dealt with if sexually transmitted diseases and AIDS are to be curbed, not to mention eradicated. While far fewer AIDS cases are reported in the north, there are also far fewer economic opportunities in that region; educational institutions are inferior to those in the south; health care facilities are insufficient.

The southern cities of Accra and Kumase are magnets for those northerners and rural dwellers de-stabilized by poverty. Migrants come to the cities, leaving family or spouse behind, to seek their fortune. Many of the women are uneducated, they have few skills, they are dependent upon men to support them. Sex is the bargaining chip. Some migrant men become truck drivers, an occupation which takes them long distances, to different towns and people, and to the beds of different women. Some city men become prosperous, as businessmen, members of the military, professionals, able and willing to support a girlfriend or two.

Many who fall sick are afraid to go to the polyclinics; they fear being recognised and being stigmatised. Many are accustomed to using traditional doctors and herbalists. Many do not have money. Many have families they can return to.

Awareness of AIDS is high and yet people continue to take risks. STDs are known as a predisposing factor to AIDS. Awareness of STDs, of their causes and their symptoms, must be made greater. The government should enlist the various levels of traditional leadership, of those whom the citizenry listen to—chiefs, church leaders, community elders, and traditional healers. They must make sure that boys and girls, men and women of all ages, understand the dangers and the correlations between STDs and AIDS. They must eradicate inequities that prevent everyone from having access to continuing education and treatment.

Will this suffice? Those working in the trenches, the doctors and medical researchers, would say not, because this is not an ideal world and people do not follow rules. The immediate question is what measures of prevention and eradication can be put to work now.

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